Claims:

1. A method of detecting particles including emitting a beam of radiation into a monitored region and detecting a variation in images of the region indicating the presence of the particles.

2. A method as claimed in claim 1 including modulating the beam of radiation.

3. A method as claimed in claim 2, wherein scattered radiation within the zone is represented in one or more segments of a corresponding image, which allows for the location of the particles in the region to be identified.

4. A method as claimed in claim 4, wherein the location of the particles is determined in accordance with a geometric relationship between the locations of a source of emitted radiation, a direction of the emitted radiation and a point of image detection wherein, the geometric relationship is determined from the images.

5. A method as claimed in any one of the preceding claims, wherein the detected variation is an increase in scattered radiation intensity.

6. The method as claimed in claim 6, wherein the increase is assessed with reference to a threshold value.

7. The method as claimed in claim 7, wherein the threshold value is calculated by averaging integrated intensity values from the images.

8. The method as claimed in claim 7 or 8, comprising assigning different threshold values for different spatial positions within the region.

9. A method as claimed in any one of the preceding claims, comprising directing the radiation along a path and identifying a target in the images, the target representing a position at which the radiation is incident on an objective surface within the region.

10. A method as claimed in claim 10, wherein a location of the target in the images is monitored and the emission of radiation is ceased in response to a change in the

location of the target.

11. A method as claimed in any one of the preceding claims, comprising identifying a location of an emitter in the images.

12. A method as claimed in claim 12, comprising determining an operating condition of the emitter based on radiation intensity at the identified location of the emitter.

13. A method as claimed in any one of the preceding claims, wherein the images are processed as frames which are divided into sections which represent spatial positions within the monitored region.

14. A method as claimed in claim 14, comprising monitoring intensity levels in associated sections of the images and assigning different threshold values for different spatial positions within the region which correspond to the associated sections.

15. Apparatus for monitoring a region, comprising:

an emitter for directing a beam of radiation comprising at least one predetermined characteristic into the region;

an image capture device for obtaining at least one image of the region; and

a processor for analysing the at least one image to detect variation of the at least one characteristic between the images, indicating presence of particles within the region.

16. Apparatus as claimed in claim 16 where the processor is adapted to determine the location of particles in accordance with a geometric relationship between the locations of the emitter, the directed beam of radiation and the image capture device wherein, the geometric relationship is determined from the analysed images.

17. Apparatus as claimed in claim 16 or 17, comprising a plurality of emitters, arranged to direct radiation along different respective beam paths.

18. The apparatus as claimed in claim 18, further comprising one or more filters for adapting the image capture device to capture radiation from the emitter in preference to radiation from other sources.

19. The apparatus as claimed in claim 19, wherein one of the filters is a temporal filter.

20. The apparatus as claimed in claim 19, wherein one of the filters is a spatial filter.

21. The apparatus as claimed in claim 19, wherein one of the filters is a band-pass filter.

22. The apparatus as claimed in claim 19, wherein one of the filters is a polarising filter.

23. The apparatus as claimed in any one of claims 16 to 23, wherein the image capture device comprises an attenuator

24. The apparatus as claimed in claim 24, wherein the attenuator comprises a variable aperture device.

25. The apparatus as claimed in any one of claims 16 to 25, comprising a plurality of image-capturing devices.

26. The apparatus of any one of claims 16 to 26 wherein the image capture device comprises a camera.

27. The apparatus of any one of claims 16 to 27, wherein the emitter comprises a laser.

28. A method of detecting particles comprising the steps of: determining a path of a beam of radiation comprising placing a first image capturing device to view a source of the radiation and at least a part of the path of the beam of radiation; communicating the position of the source to a processor; placing a second image capturing device to view an impact point of the beam of radiation; communicating related position information of the impact point to the processor; determining the path of the beam in accordance with a geometric relationship between the position of the source and the position information of the impact point.

29. A method of detecting particles comprising the steps of: determining a region of interest containing a path of a beam of radiation comprising locating a first point, being the position of a source of the beam, using an image capturing device; locating a second point being the intersection of the beam of radiation with a field of view of the image capturing device, determining the path of the beam in accordance with the first

and second point; calculating a region of interest containing the determined beam path.

30. A method as claimed in claim 30, wherein the step of locating a second point is performed with at least one substantially transparent probe.

31. A method as claimed in claim 31, wherein the probe is removed from the beam path.

32. A method of determining the level of smoke at one or more subregions in a region of interest comprising: directing a beam of radiation within the region, selecting a view of at least a portion of a path of the beam with an image capture device, determining the location of the source of the radiation relative to the image capture device, determining the direction of the beam relative to the image capture device, dividing the beam of radiation into segments, determining a geometric relationship between the segments and the image capture device, adjusting a level of light received by the image capture device of each segment so as to allow for the geometric relationship.

33. A method as claimed in claim 33, wherein the segments comprise at least one pixel.

34. A method as claimed in claim 34, wherein the segments are grouped to form the subregions for smoke detection.

35. Apparatus adapted to detect particles, said apparatus comprising processor means adapted to operate in accordance with a predetermined instruction set, said apparatus, in conjunction with said instruction set, being adapted to perform the method as claimed in any one of claims 1 to 15 and 29 to 35.

36. A computer program product comprising; a computer usable medium having computer readable program code and computer readable system code embodied on said medium for detecting particles within a data processing system, said computer program product comprising; computer readable code within said computer usable medium for performing the method steps of any one of claims 1 to 15 and 29 to 35.